

REMARKS

Applicant has reviewed and considered the Office Action dated January 14, 2003, and the references cited therewith.

Claims 7, 9 and 21 are amended, no claims are cancelled, and no claims are added; as a result, claims 16-26 are now pending in this application.

§112 Rejection of the Claims

Claims 7, 9, and 21 were rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Claims 7, 9 and 21

Applicant has amended claims 7, 9 and 21 to particularly point out and distinctly claim the subject matter. It is believed that no new matter is introduced by the amendments and that the amendments are supported by the specification, including, for example, Figures 5A and 5B. Withdrawal of the rejection under 35 USC § 112 is believed appropriate.

Reconsideration and allowance of claims 7, 9 and 21 is respectfully requested.

§103 Rejection of the Claims

Lang and Baselt

Claims 1-3, 6-7, 9-19, 21, 22 and 24 were rejected under 35 USC § 103(a) as being unpatentable over Lang et al. (Appl. Phys. A (1998) 66: S61-64), hereinafter Lang, in view of Baselt et al. (J. Vac. Sci. Technol. (1996) 14: 789-793), hereinafter Baselt. Applicant respectfully traverses the rejection and submits that proper *prima facie* obviousness has not been established.

Claim 1

Applicant respectfully traverses the rejection of claim 1 because, among other things, the record does not identify a proper motivation to combine Lang and Baselt. M.P.E.P. § 2143.01 provides that "if the proposed . . . combination of the prior art would change the principle of

operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. For example, it appears that the principles of operation for Baselt are different than that of Lang, and therefore the proposed combination is improper. Baselt refers to "waving a small magnet over the cantilever [to produce] a measurable deflection." (Page 3, third full paragraph). In contrast, Lang refers to detecting "resonance frequency shift." (Page s62, second column, second full paragraph). Thus, it appears, the principles of operation are different and therefore, the requisite motivation for combining or modifying Lang and Baselt is lacking.

Further, even if Lang and Baselt could be properly combined, the proposed combination does not teach all elements of the claim. Applicant is unable to find, in the proposed combination, a structure having an immobilized binding partner that binds to an analyte, wherein the structure resonates at a frequency based on the mass of the analyte, as recited in claim 1.

Reconsideration and allowance of claim 1 is respectfully requested.

Dependent Claims 2, 3, 6, 7, 9-19, 21, 22 and 24

Notwithstanding the amendments to claims 7, 9 and 21, Applicant respectfully submits that claims 2,3, 6-7, 9-19, 21, 22 and 24 are patentable as dependent claims of patentable base claim 1, and the discussion for claim 1 is repeated in support of claims 2, 3, 6, 7, 9-19, 21, 22 and 24.

Reconsideration and allowance of claims 2, 3, 6, 7, 9-19, 21, 22 and 24 is respectfully requested.

Lang, Baselt and Lee

Claim 20 was rejected under 35 USC § 103(a) as being unpatentable over Lang in view of Baselt as applied in claims 1-3, 6-7, 9-19, 21, 22 and 24 and, further in view of Lee et al. (U.S. 5,807,758), hereinafter Lee.

Applicant respectfully traverses the rejection of claim 20 because, among other things, the record does not identify a proper motivation to combine Lang, Baselt and Lee. As noted above, Baselt and Lang are not properly combinable. Furthermore, it appears the addition of Lee

to Baselt and Lang does not address the shortcomings of the proposed combination of Baselt and Lang. Thus, it appears, the requisite motivation for combining Lee with Baselt and Lang is lacking, and therefore, proper *prima facie* obviousness has not been established.

Furthermore, Applicant respectfully submits that claim 20 is patentable as a dependent claim of patentable base claim 1, and the discussion for claim 1 is repeated in support of claim 20.

Reconsideration and allowance of claim 20 is respectfully requested.

Lang, Baselt and Quate

Claims 4, 5, 8 and 23 were rejected under 35 USC § 103(a) as being unpatentable over Lang et al. in view of Baselt et al. as applied in claims 1 and 22 and, further in view of Quate et al. (U.S. 6,203,983), hereinafter Quate.

Applicant respectfully traverses the rejection of claims 4, 5, 8 and 23 because, among other things, the record does not identify a proper motivation to combine Quate with Lang and Baselt. Pursuant to M.P.E.P. § 2143.01, the prior art must suggest the desirability of the claimed invention. In traversing, Applicant submits that the record does not include a finding as to the specific understanding or principal within the knowledge of the skilled artisan that would have provided the motivation to modify in the manner proposed. The fact that the claimed invention is within the capabilities, or considered conventional to one of ordinary skill in the art is not sufficient to establish *prima facie* obviousness. See *M.P.E.P. § 2143.01* and see *In Re San Su Lee*, 277 F.3d 1338 (CAFC 2002). Thus, it appears, the requisite motivation for combining Quate with Lang and Baselt is lacking, and therefore, proper *prima facie* obviousness has not been established.

Furthermore, Applicant respectfully submits that claims 4, 5, 8 and 23 are patentable as dependent claims of patentable base claim 1, and the discussion for claim 1 is repeated in support of claims 4, 5, 8 and 23.

Reconsideration and allowance of claims 4, 5, 8 and 23 is respectfully requested.

Lang, Baselt and Carr

Claim 25 was rejected under 35 USC § 103(a) as being unpatentable over Lang et al. in view of Baselt et al. as applied in claim 1 and further in view of Carr et al. (J. Vac. Sci. Technol. B (1997) 15: 2760-2763), hereinafter Carr.

Applicant respectfully traverses the rejection of claim 25 because, among other things, the record does not identify a proper motivation to combine Carr with Lang and Baselt. Pursuant to M.P.E.P. § 2143.01, the prior art must suggest the desirability of the claimed invention. In traversing, Applicant submits that the record does not include a finding as to the specific understanding or principal within the knowledge of the skilled artisan that would have provided the motivation to combine in the manner proposed. The fact that the aspects of the claimed invention were individually known in the art is not sufficient to establish *prima facie* obviousness without some objective reason to combine the teachings of the references. *M.P.E.P.* § 2143.01 and see *In Re San Su Lee*, 277 F.3d 1338 (CAFC 2002). Thus, it appears, the requisite motivation for combining Carr with Lang and Baselt is lacking, and therefore, proper *prima facie* obviousness has not been established.

Furthermore, Applicant respectfully submits that claim 25 is patentable as a dependent claim of patentable base claim 1, and the discussion for claim 1 is repeated in support of claim 25.

Reconsideration and allowance of claim 25 is respectfully requested.

Claim 26

Applicant is unclear as to the status of claim 26. Applicant respectfully requests, pursuant to M.P.E.P. § 707.07(d), designation of the *statutory basis* for any ground of rejection by express reference to a section of 35 U.S.C.

Clarification of the status of claim 26 is respectfully requested.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney ((612) 373-6911) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

HAROLD G. CRAIGHEAD ET AL.

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. Box 2938
Minneapolis, MN 55402
(612) 373-6911

Date

April 14, 2003

By



David W Black
Reg. No. 42,331

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, Washington, D.C. 20231, on this 14th day of April, 2003.

Dawn M. Poole

Name

Dawn M. Poole

Signature